## I. Power Plants and Refineries in the Counties Surrounding Trinity River NWR

### Table I-1. Power Plants

<table>
<thead>
<tr>
<th>Utility</th>
<th>Plant Name</th>
<th>Megawatt</th>
<th>County</th>
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Appendix J. Service Response to Public Comment

J. Service Response to Public Comment

This appendix summarizes the comments that were received on the Draft Comprehensive Conservation Plan and Environmental Assessment (CCP/EA) for Trinity River National Wildlife Refuge. The Draft CCP/EA was released for public review and comment from March 28, 2012 to May 4, 2012. The public was notified of the release of the Draft CCP and EA with a Notice of Availability in the Federal Register on March 28, 2012 (Volume 77, Number 60, pp. 18,853–18,856), as well as through local media outlets (local newspapers, radio station, and television). Additionally, public notices were posted on various community bulletin boards in Liberty, TX, and Dayton, TX.

A CD-rom version of the document was sent to approximately 700 individuals, organizations, elected officials, and local, state, and federal agencies; and an electronic copy was made available on the Service’s website. An open house was held during the comment period (April 10, 2012) at the Refuge headquarters building, providing the public with an opportunity to discuss the plan with Service staff. Despite being heavily advertised, few individuals attended this event but no comments were submitted. The Service received two comment letters, one from the Houston regional Group of the Sierra Club and one from Defenders of Wildlife. Summaries of the comments received in each letter and the Service’s responses follow.

The following comment was received from Defenders of Wildlife.

While Defenders of Wildlife is not able to submit detailed comment on the draft CCP, they would like the Refuge to refer to criteria developed in the Defenders of Wildlife fact sheet “Climate Change and National Wildlife Refuge Planning” to ensure that climate change is comprehensively considered and addressed.

Response: The Refuge reviewed the Defenders of Wildlife fact sheet and using best available data, integrated climate change throughout the CCP. For more information, please refer to the following sections of the CCP:

- Section 1.3.3.1 Climate Change
- Section 3.3.1.4 Estimated Conditions due to Climate Change
- Section 3.3.2.9 Concerns Regarding Wildlife Populations
- Chapter 4, Wildlife and Habitat Management Objective 6, Strategies 1–6

The following comments were received from the Sierra Club. In the original letter, there were no comments for numbers 73–75, the Service left the numbers and addressed each concern the way they were received in this office to maintain consistency, therefore comments go from number 72 to number 76.

1) Page 1-1, 1. Introduction, states “The 25,000-acre Trinity River National Wildlife Refuge … frequently floods, bottomland hardwood forest.” It is of great concern that FWS does not address the issue of water projects that result in the loss of instream flows in the Trinity River. In particular, the FWS never discusses the cumulative impacts that water projects have on the flooding frequency, duration, and seasonality in TRNWR. Specifically, the U.S. Army Corps of Engineers is preparing now a draft environmental impact statement (EIS) for the
Luce Bayou Diversion Project (LBDP). This project, which is backed by the City of Houston and the Coastal Water Authority, if constructed will remove about 500 million gallons of water/day from Trinity River instream flows. The LBDP will take water from the Trinity River to Lake Houston in the San Jacinto River Watershed.

This project threatens the TRNWR, the Trinity River Delta, and Galveston Bay (salinity levels). The LBDP will change the freshwater flow into Galveston Bay. Yet FWS says not one word about the LBDP even though mitigation is proposed (Capers Ridge) that would add about 3,000 acres to the TRNWR. Talk about the LBDP and its potential impacts on the TRNWR and the achievement of goals in the CCP.

Response: The Service included an in depth assessment of cumulative impacts on the proposed project in the Section 4.6 of the EA in an attempt to address this comment.

2) Page 1-13, West Gulf Coastal Plain, states “the pine is originally longleaf in the southern portion.” The Sierra Club believes that this statement is incorrect. In the southern portion of the West Gulf Coastal Plain in East Texas the pine that dominates is Loblolly Pine. This is documented via “Forest Resources of Southeastern Texas,” by J.W. Cruikshank and I.F. Eldredge, Southern Forest Experiment Station, U.S. Forest Service, U.S. Department of Agriculture, Miscellaneous Publication No. 326, February 1939 (copy enclosed) that shows the various wooded areas in Liberty County.

This is further documented in the “Final Environmental Impact Statement for the Revised Land and Resource Management Plan, National Forests and Grasslands in Texas,” U.S. Forest Service, 1996, Appendix H, pages 4 and 5, Loblolly Pine, when it states “The original loblolly belt occupied approximately 6,000 to 7,000 square miles in southeast Texas (Bray 1906). This apparently natural occurrence of a large loblolly pine region may be unique in the Southeast … the southeast Texas loblolly belt may be the “Big Thicket” of east Texas (Collier 1964). Forests in this area are thought to have been quite dense and jungle-like, and a significant barrier to overland travel (Parks and Cory 1938).This description contrasts markedly with descriptions of other pine belts. Pure pine stands in the loblolly region were rather limited in area, often restricted to deep sands (Zon 1904). More typically, loblolly seemed to grow in association with hardwood. Zon (1904) wrote that “the half swampy flats grow a jungle of hardwood with some loblolly and that oaks are especially abundant and of excellent growth throughout the area …. These descriptions imply fire regimes very different from those typically ascribed to longleaf or shortleaf forests. Fire is certainly an important ecological factor in these Loblolly forests … However, loblolly is not a fire-resistant species (McCune 1988), and fire frequency associated with occurrence is lower than that associated with the occurrence of most other southern pines (Landers 1989).”

FWS should change pages 1-13 and 1-14 to reflect the local significance of Loblolly Pine in Liberty County and that it is not a fire resistant species. See Attachment 1.

Response: Page 1-13 of the Draft Plan discusses the West Gulf Coastal Plain which is one of two Partners in Flight physiographic areas identified by Partners in Flight. This particular narrative describes general characteristics of the Ecoregion which includes four states and over 37,000,000 acres as described on the page in question. This section is not intended to be specific to the refuge. For refuge specific vegetation, please see Vegetation Maps and Terrestrial Vegetation Classes in Chapter 3.
3) Page 3-6, Gulf Coastal Plains and Ozarks Landscape Conservation Cooperative, FWS states “... accelerating climate change threatening to affect wildlife and fisheries ....” Climate change is not threatening to affect wildlife and fisheries it already affects wildlife and fisheries. This is not a prediction of an effect but an effect that is happening right now and FWS should state this clearly.

**Response:** The text in question is followed in the same paragraph identifies action based strategies to “effectively apply our emerging climate knowledge to predict habitat and species changes and to target our conservation action.”

4) Page 3-7, Gulf Coast Prairie Landscape Conservation Cooperative, the San Jacinto River should be added to the rivers listed at the bottom of paragraph one.

**Response:** Although the San Jacinto falls within the Gulf Coast Prairies and Landscapes Conservation Cooperative (LCC) the identified text is not an all inclusive list of rivers in the LCC. Thanks for pointing out that the San Jacinto River falls within this LCC.

5) Page 3-9, Alteration of the Landscape, the red-cockaded woodpecker is not a bottomland hardwood forest dependent wildlife species as stated in this section. The RCW is an upland pine dominated wildlife species.

**Response:** Comment noted. The RCW was removed from this section.

6) Page 3-15, Sam Houston National Forest, there is almost no Longleaf Pine in SHNF. Longleaf Pine does not dominate any portion of SHNF. Other trees that should be added to appropriately describe the forests of SHNF include Green Ash, Water Hickory, Cherrybark Oak, Willow Oak, Water Oak, Cedar Elm, Black Gum, Swamp Chestnut Oak, and Southern Magnolia.

**Response:** Comment noted; the Service incorporated comment into Final Plan.

7) Page 3-16, Table 3-1, Lake Houston Park, which the City of Houston owns, should be added to this list.

**Response:** The Service has added Lake Houston Wilderness Park to the Table.

8) Page 3-23, Water Quality, the Clean Water Act was enacted in 1972 and not 1977.

**Response:** Page 3-23 and B-2 will incorporate correct date.

9) Page 3-25, Soils and 3.2.5 Mineral Resources, the Sierra Club supports expansion of the boundary of the TRNWR to 150,000 to 200,000 acres and the acquisition of all oil and gas and other mineral rights as they become available for purchase.

**Response:** Chapter 4 Objective 1 identifies the refuge desire to increase the acquisition boundary and continue to pursue attempts to acquire lands from willing sellers and donors throughout the acquisition boundary. The Service will continue to pursue opportunities to purchase oil and gas and other mineral rights as they become available.
10) Page 3-26, 3.2.6 Concerns Regarding the Physical Environment, FWS again fails to list the LBDP which will reduce instream flows for bottomland hardwood forests along the Trinity River.

*Response:* The Service will list LBDP as another potential source of water removal in the described section.

11) Page 3-39, West Gulf Coastal Palin Nonriverine Wet Hardwood Flatwoods, *Quercus michauxii* is not called swamp oak it is called Swamp Chestnut Oak.

*Response:* Chestnut was added to swamp oak.

12) Page 3-42, Hydrology, LBDP will reduce the amount of water flow available for normal and flood times.

*Response:* The Service has incorporated suggested comment.

13) Page 3-43, Land Acquisition, the Sierra Club supports FWS working with Liberty County to clear title to red flag floodplain subdivisions that have gone broke and whose property title-holders are not known via court records so that the title can be cleared and FWS can acquire these important floodplain lands.

*Response:* See response for number 9.

14) Page 3-45, Urbanization, the impacts of cats and dogs on wildlife is another urbanization problem.

*Response:* Cats and dogs were added to the list of impacts from urbanization.

15) Page 3-51, Rafinesque’s Big-eared Bat, Alligator Snapping Turtle, Swallow-tailed Kite, Alligator Gar, Little Blue Heron, and Three-toed amphiuma, FWS should state why it has chosen these species as focal/representative species and how it will monitor these species.

*Response:* Paragraph 1 of section 3.3.2.2 of the Draft Plan describes the criteria used to select focal/representative species.

16) Page 3-64, 3.6.1.3 Oil and Gas Operations/Management, the Sierra Club believes that under the National Environmental Policy Act (NEPA) that FWS is required to provide the public with a comment period for any oil/gas related activities that are proposed in TRNWR. The FWS should ensure that this requirement is mentioned in the CCP/EA.

*Response:* Although there are no oil and gas activities proposed in the CCP, the last paragraph of Section 3.6.1.3 Oil and Gas Operations/Management states that “various laws, regulations and administrative procedures must be adhered to before access is granted.” This includes all NEPA requirements which would include a public comment period on all EA’s and EIS’s.
17) Page 3-64, 3.6.1.6 Law Enforcement and Resource Protection, the Sierra Club supports hiring at least 3–5 more law enforcement officers to patrol TRNWR.

Response: The Service appreciates your support for additional law enforcement personnel. Table 5-2 identifies personnel needed beyond current levels to implement our proposed action identified in the CCP.

18) Page 3-66, Invasive Species (flora), Table 3-9, the Sierra Club is concerned about the aerial broadcast use of herbicides due to the inability to control where herbicide drift, the impacts on non-targeted plants, and the impacts on people. The Sierra Club is also concerned about the use of foliar spray for herbicides because of the magnitude of herbicide drip. The Sierra Club recommends cut and spray of cut stem as being a more direct method of herbicide application that results in less herbicide drip.

Response: The Service shares your concerns of herbicide drift and utilizes a variety of tools to maximize limited funding and resources on the war against invasive flora throughout the refuge. Section 2.4.1.2 of the Environmental Assessment under “Invasive Species (Flora)” details the methods of basal bark and foliar applications and how they are used to combat invasive species. In Section 4.2 of the EA under Impacts from Herbicide Application” the Refuge evaluates existing and potential impacts of the use of herbicides and identifies the guidelines and requirements needed in order to utilize herbicide application. In addition to these guidelines and requirements and Service policy, the refuge also identifies additional mitigation measures used to minimize impacts from the use of herbicides.

19) Page 3-70, Table 3-10, the Sierra Club is concerned about the use of any all terrain vehicles (ATVs) in TRNWR by hunters. Allowing such use sends a mixed signal to people in the area about the legitimacy of ATV use.

Response: The Service shares your concerns on the use of ATV’s on the refuge and only allows ATV usage for hunters with disabilities who without the use of ATV’s would not be able to access designated hunting areas. No other ATV use is allowed by the public on the refuge.

20) Page 3-78, 3.6.4.1 Wilderness Areas, FWS should state clearing what the minimum requirements are for wilderness. The Sierra Club vigorously disagrees with FWS that none of the units “meet the minimum criteria for a Wilderness Study Area.” With regard to primitive recreation and solitude the Sierra Club has visited Champion Lake, Boar’s Den, Page, McGuire, Butler, and Brierwood Units. In most of these units the hand of man is not noticeable, solitude is as present as Little Lake Creek Wilderness Area in Sam Houston National Forest, you experience quiet and natural sounds as strongly and vividly as any natural area in Texas. The size of the units does not disqualify them from consideration because The Wilderness Act allows wilderness in units less than 5,000 acres as long as they can be managed as wilderness.

Many of the units have few or no roads and the roads that are present do not disqualify the rest of the unit from consideration as wilderness. The one outstanding problem, and even this is not a deal killer is that mineral rights are not owned by the government. However, in the five East Texas Wilderness Areas in the National Forests and Grasslands many of the mineral rights are not held by the government but yet these areas are wilderness. The FWS has done
a very poor and inaccurate job of determining the wilderness potential of the TRNWR. FWS must do better in the final CCP/EA. The public deserves nothing less.

Response: After a thorough investigation, the Wilderness Review Team determined that although some of the units contained some wilderness characteristics, none of the areas were appropriate for further study. The primary rationale for not recommending the Wilderness Study portion of the review is that the team did not feel like any areas smaller than 5,000 contiguous acres are of sufficient size to make practicable its preservation and use in an unimpaired condition, and of size suitable for wilderness management for the reasons identified in section 2.1 of Appendix G.

21) Page 4-1, 4.1 Wildlife Habitat Management, Objective 1: Land Acquisition, FWS states that acquisition will “foster the ecological integrity of the lower Trinity River floodplain ecosystem.” FWS must tell the public why this is the case. The Sierra Club prefers a land acquisition objective that is for 150,000–200,000 acres of floodplain and adjacent upland forest ecosystems on the Trinity River. We will not get a second chance and we need to acquire as much land as quickly as possible before population increases and urbanization overwhelm Liberty and San Jacinto Counties. That is why 27 years is far too long a time to set as a goal to complete acquisition. In addition, land usually does not get cheaper. So the sooner land can be acquired the better use of the public’s money.

Response: The Service appreciates the Sierra Club’s preference for a larger acquisition objective and agrees that additional acres will continue to benefit bottomland hardwood forests. Section 4.1 of the CCP, Objective 1, is to update the Preliminary Project Proposal to add additional acreage to the existing acquisition boundary to encourage continuous growth of the Refuge and identifies 6 strategies to achieve this goal.

22) Page 4-2, Strategies, the Sierra Club supports putting a service realty specialist on the refuge to assist with acquisitions for TRNWR and other refuges. An onsite realty specialist, will speed-up the process of land acquisition and reduce the price paid. The Sierra Club supports identification of lands to be acquired and expansion of the boundary of the TRNWR but this must be done with public review, comment, and understanding of the proposal.

The Sierra Club suggests that TRNWR complete the work necessary for it to become a mitigation bank so that restoration, acquisition, and other work can be funded in way that enhances federal acquisition money. With regard to an ecoregional approach the Sierra Club supports a study that documents where corridors, buffers, and linkages exist and then makes these lands a priority for acquisition. For instance, linking up the Wallisville Lake Area operated by the U.S. Army Corps of Engineers to the TRNWR is a priority that FWS should pursue. The same is true for linking to Davis Hill State Park. If Texas Parks and Wildlife Department ever decides it wants to get rid of Davis Hill State Park then FWS should acquire this important area. In addition, acquisition by FWS of land around the Davis Hill State Park to include the entire salt dome buffers the park with federal lands and is desirable.

Response: The Service appreciates these suggestions on future acquisition efforts and will consider them when drafting a new Preliminary Project Proposal.

23) Page 4-2, Objective 2: Invasive Floral Monitoring and Management, the Sierra Club is not opposed to the use of herbicides. However, we are concerned about the use of aerial and
foliar application methods. Aerial application is extremely hard to control and thus drift occurs and non-target plants and humans are put at risk. Foliar application often involves a lot of drip pollution which exposes non-target plant species to damage. If at all possible, the Sierra Club prefers the use of herbicide on the cut stem because it usually involves less drip pollution.

**Response:** The Refuge shares the Sierra Club’s concern of non target species and other risks identified by the use of pesticides. The Refuge uses a variety of methods to maximize control efforts of invasive flora including basal bark applications. Section 4.2 of the EA under Impacts from Herbicide Application” the Refuge evaluates existing and potential impacts of the use of herbicides and identifies the guidelines and requirements needed in order to utilize herbicide application. In addition to these guidelines and requirements and Service policy, the Refuge also identifies additional mitigation measures used to minimize impacts from the use of herbicides.

24) **Page 4-3, Objective 3: Invasive Faunal Monitoring and Management,** the Sierra Club supports an active program of feral hog killing. The Sierra Club has for many seen the damage that feral hogs do to plant and animal species and their habitats. The Sierra Club supports the preparation of a Hog Management Plan but this must be done with public review, comment, and understanding of the proposal. The Sierra Club also supports use of the USDA Animal Damage Control to kill feral hogs. The Sierra Club does not oppose increased recreational hunting but mitigation must be implemented so that there are units where the public can visit and recreate while hunting is ongoing. Not all units should be closed for recreational hog hunting at the same time. Staging unit closures for recreational hog hunting mitigates public use impacts that occur to other recreational activities and prevent curtailed recreational use if total closure of all units occurred at the same time.

**Response:** The Service appreciates your support on the control of feral hogs and with our strategies outlined in Chapter 4, Objective 3 of the CCP. Your suggestions will also be considered in the development of the Hog Management Plan.

25) **Page 4-3, Objective 4: Bat Monitoring,** the Sierra Club supports protection of Rafinesque’s Big-eared Bats and all other bats on TRNWR. The Sierra Club urges FWS not to wait two years for a 10% decrease to occur before implementation of actions to mitigate this decrease. The FWS should, after one year of a decrease occurs that is of concern, implement mitigation measures at that time. Two years could be too long a time to wait to respond to a significant population decrease.

Under **Strategy** 3, don’t use the term “timber stands.” This is a forestry term which refers to the commercial logging of trees. The term “forests” would be a more accurate description of the areas in question.

**Response:** The Refuge feels that documenting under a 10 percent decrease in the population would be from bats transitioning to natural roost sites as older growth trees become more desirable.

In Strategy 3 the term timber stands has been replaced with forests.

26) **Page 4-4, Objective 5: Habitat Inventory and Monitoring,** the Sierra Club supports habitat inventory and monitoring. However, we believe what has been proposed is not
ambitious or complete enough. Instead of survey points that cover 60% of a 1,500 acre parcel, the survey points should represent habitats on 100% of the parcel. The habitats that FWS proposes not to monitor, tidal flow lands, differences in elevations, logged within the last 30 years, pine ridges, or severely altered habitats must be monitored to determine how they recover and what diversity they have as opposed to the bottomland hardwood forests.

The Sierra Club also supports monitoring every 3 years versus every 5 years because 5 years is a long time to wait. Large changes can occur sooner than 5 years. Waiting 5 years gives only 3 data points in the 15 year life of the CCP. Can FWS really determine trends from only 3 data points in 15 years?

The Sierra Club does not support logging of any bottomland hardwood forest habitat other than removal of non-native invasive plant species. The reason the Sierra Club brings this issue up is because FWS uses phrases like “… if any actions are needed … used to guide the development of appropriate strategies to achieve habitat objectives … make habitat management decisions … can best contribute to maintaining biological diversity … all areas undergoing active management ….” The Sierra Club is aware that other NWR log bottomland hardwood trees and does not support such actions in TRNWR.

Response: Thanks for your suggestion on additional inventory and monitoring. The refuge is proposing inventory and monitoring under objective 5 to establish baseline data on refuge habitats. The refuge feels that the six strategies used to accomplish this objective will set the standards for best management practices on the refuge throughout the life of the CCP and beyond.

The CCP does not propose any logging activities on the Trinity River NWR.

Strategy 6 states “Develop small scale hydrological projects.” The Sierra Club wants a better explanation about what this means. Some green-tree reservoirs when constructed have been detrimental to bottomland hardwood forests.

The Sierra Club wants FWS to make sure that a Habitat Management Plan has full public review, comment, and understanding of the proposal before it is approved. The Sierra Club is concerned about management during climate change because climate change creates a moving habitat target.

The Sierra Club does not support a focus on any specific bottomland hardwood forest species composition. FWS must let Nature sort out how it will respond to climate change and not attempt to manipulate to make things the way humans want the forests. Since there has been a tremendous amount of human created disturbance in the TRNWR it will take a long time for bottomland hardwood forests to heal and recover. Nature, via ecological succession, will reassert itself and decide what it wants to grow in the TRNWR. The Sierra Club prefers a goal that ultimately leads to old growth bottomland hardwood forests maintained by natural disturbance.

Response: Developing small scale hydrological projects consists of improving structures that were inherited as some parcels became refuge tracts. Some tracts were purchased with existing culverts and elevated dirt roads that can act as levees. Depending on the site, the
refuge proposes to remove, cleanout, or enlarge existing structures to create better natural sheet flow of water.

The Refuge has identified a Habitat Management Plan as a future step down management plan under Chapter 5. The Refuge will fulfill all policy and legal requirements including all National Environmental Policy Act requirements when completing this plan.

The Refuge will continue to use best management practices to promote natural succession of bottomland hardwood forest.

27) Page 4-5, Objective 6: Climate Change Monitoring, the Sierra Club supports climate change monitoring. However, we believe what has been proposed is not ambitious or complete enough. Instead of having survey points that cover 60% of a 1,500 acre parcel, the survey points should represent habitats on 100% of the parcel. The habitats that it proposes not to monitor, tidal flow lands, differences in elevations, logged within the last 30 years, pine ridges, or severely altered habitats need to be monitored to determine how they are affected by climate change.

The Sierra Club also supports monitoring every 3 years versus every 5 years. Five years is a long time to wait. Large changes can occur sooner than 5 years. Waiting 5 years gives only 3 data points in the 15 year life of the CCP. Can FWS really determine trends from only 3 data points in 15 years?

The Sierra Club also recommends that non-native invasive plant species be monitored as part of climate change monitoring. There is something specific FWS can do with regard to the reduction in climate change emissions. If oil/gas resources will be exploited in TRNWR then FWS can require that there be a reduction in the oil/gas footprint directly by use of methods that generate less climate change emissions and indirectly by the use of carbon sequestration credits to compensate for the burning of oil/gas products on TRNWR and oil/gas that is extracted from the TRNWR.

An additional climate change strategy that FWS should pursue is the identification of requirements for the TRNWR that will make it biologically and ecologically more resilient to climate change. This includes the protection of core areas, buffer areas around cores, and corridors that connect to other protected lands. Lands that fulfill these purposes should be given a higher priority for acquisition.

Response: The Service appreciates the Sierra Club’s support and comments on climate change monitoring. The Refuge feels like climate change monitoring is important enough to dedicate an objective, specific rationale and 6 strategies exclusively dedicated to monitoring the affects of climate change and using this data to utilize best available science to manage resources within ecosystems in a changing climate. By exploiting our collective data to utilize best available science, the Service is identifying survey and monitoring needs to make bottomland hardwood forests biologically and ecologically more resilient to climate change.

28) Pages 4-6 and 4-7, Objective 7: Bird Inventory and Monitoring, the Sierra Club supports bird inventory and monitoring. However, we believe what has been proposed is not ambitious or complete enough. Instead of having survey points that cover 60% of a 1,500 acre parcel, the survey points should represent habitats in 100% of the parcel. The habitats that are
proposed for no monitoring, tidal flow lands, differences in elevations, logged within the last 30 years, pine ridges, or severely altered habitats need to be monitored to determine how they are utilized by birds.

The Sierra Club also supports monitoring every 3 years versus every 5 years.

Five 5 years is a long time to wait. Large changes can occur sooner than 5 years. Waiting 5 years gives only 3 data points in the 15 year life of the CCP. Can FWS really determine trends from only 3 data points in 15 years?

**Response:** Ideally the Refuge would prefer to monitor 100 percent of the refuge on an annual basis, but with limited funding and resources, the refuge is utilizing a science based strategic approach to conduct bird inventory and monitoring and feels that the proposal is sufficient to determine both short and long term trends. The identified survey and monitoring schedule recognizes both the need for timely and accurate data to support management actions, while also recognizing the limits of refuge budget and staff. The selected science based approach is sufficient to determine both short and long term objectives while utilizing best available science to manage refuge resources.

29) Pages 4-8 and 4-9, Objective 8: Reptiles and Amphibians Inventory and Monitoring, the Sierra Club supports reptile and amphibian inventory and monitoring. However, we believe what has been proposed is not ambitious or complete enough. Instead of having survey points that cover 60% of a 1,500 acre parcel, the survey points should represent habitats in 100% of the parcel.

The habitats that are proposed not to be monitored, tidal flow lands, differences in elevations, logged within the last 30 years, pine ridges, or severely altered habitats need to be monitored to determine how they are utilized by reptiles and amphibians.

The Sierra Club also supports monitoring every 3 years versus every 5 years. Five years is a long time to wait. Large changes can occur sooner than 5 years. Waiting 5 years gives only 3 data points in the 15 year life of the CCP. Can FWS really determine trends from only 3 data points in 15 years?

**Response:** See response to comment number 28.

30) Pages 4-8 and 4-9, Objective 9: Mammals, the Sierra Club supports mammal inventory and monitoring. However, we believe what has been proposed is not ambitious or complete enough. Instead of having survey points that cover 60% of a 1,500 acre parcel, the survey points should represent habitats in 100% of the parcel. The habitats that are proposed not to be monitored, tidal flow lands, differences in elevations, logged within the last 30 years, pine ridges, or severely altered habitats need to be monitored to determine how they are utilized by mammals.

The Sierra Club also supports monitoring every 3 years versus every 5 years. Five years is a long time to wait. Large changes can occur sooner than 5 years. Waiting 5 years gives only 3 data points in the 15 year life of the CCP. Can FWS really determine trends from only 3 data points in 15 years?
The Sierra Club believes it is very important that FWS documents what kind, how many, and the return interval of all natural disturbances. This will assist in determining status and trends for the recovery of all plant and animal species and their habitats. Without natural disturbances succession cannot work appropriately.

Response: See response to comment number 28.

31) Page 4-9, Objective 10: Fish, the Sierra Club does not agree that FWS must “maximize production throughout the refuge.” What FWS must do is ensure that natural ecological processes are functioning appropriately. Nature will determine what type, where, and what number fish exist in what types of habitats. It is of concern that fish kills “commonly occur” in Champion Lake. The FWS should conduct research to ensure that human actions do not cause or contribute to these fish kills. If human actions are, then FWS must determine how to mitigate these actions.

FWS must look for water rights and buy them whenever possible so that fish and wildlife will be protected. FWS must find out what the natural patterns of flooding are, including seasonal flooding, and what water levels are needed to renew and invigorate the floodplain. FWS must protect water for those ecological and biological purposes in the TRNWR.

Response: The Service shares your concern for the effects of human actions on fish kills as well as your concerns for the important role water plays in ecological and biological function of the refuge. Fish kills on Champion Lake are related to lower water levels of the lake during drought years and associated drops in oxygen in the water.

The Service also shares your concerns on water rights and will pursue attempts to purchase water rights as they become available.

32) Page 4-9, 4.2 Public Use, the Visitors Services Plan should have a public comment period so the public can review, comment, and understand the proposal. The Sierra Club urges the FWS to develop carrying capacities for all recreational activities. By calculating carrying capacities now the FWS protects itself and the land if there is a sudden increase in use for a particular recreational activity. Being pro-active allows FWS move quickly to protect resources instead of playing catch-up.

Response: The Service has identified a Visitors Services Plan as a future step down management plan under Chapter 5. The Refuge will fulfill all policy and legal requirements including all National Environmental Policy Act requirements when completing this plan. Your suggestions will also be considered in the development of the Visitors Services Plan.

33) Page 4-10, Objective 1: Hunting Opportunities, do not strive to do anything. FWS should say it is going to do it. The Sierra Club urges FWS to leave some areas open for hiking, wildlife observation, etc., during hunting season so that all units are not closed at the same time.

For Strategy 1, there is no number provided for how many additional staff will be hired to manage a larger hunting program. FWS should state what this number is.

Response: Only designated hunt units on the refuge will be closed to other refuge users during hunts, the remainder of the refuge will remain open to the public.
For Strategy 1, Table 5-2 of the CCP identifies additional personnel needed beyond current levels to implement the CCP.

For Strategy 3, one more thing a law enforcement officer does is educate and teach what is and is not appropriate on the NWR. The Sierra Club supports hiring 3–5 more law enforcement officers.

Response: The Service appreciates the Sierra Club’s support of hiring additional law enforcement officers.

34) Pages 4-10 and 4-11, Objective 2: Fishing Opportunities, do not strive to do anything. FWS should say it is going to do it. For Strategy 1, there is no number provided for how many additional staff will be hired to manage a larger fishing program. FWS should state what this number is. For Strategy 5, one more thing a law enforcement officer does is educate and teach what is and is not appropriate on the NWR. The Sierra Club supports hiring 3–5 more law enforcement officers.

Response: Table 5-2 of the CCP identifies additional personnel needed beyond current levels to implement the CCP. The refuge appreciates the Sierra Club’s support of hiring additional law enforcement officers.

35) Pages 4-11 and 4-12, Objective 3: Wildlife Observation Opportunities, do not strive to do anything. FWS should say it is going to do it. For Strategy 1, there is no number provided for how many additional staff will be hired to manage a larger wildlife observation program. FWS should state what this number is.

Response: Table 5-2 of the CCP identifies additional personnel needed beyond current levels to implement the CCP.

36) Page 4-12, Objective 4: Wildlife Photography Opportunities, do not strive to do anything. FWS should say it is going to do it. FWS should define what “serious photography” is. Wildlife photography is for everyone and should not be limited to just “serious photography.” This sounds elitist. Strategy 2, eight years is a long time to wait for a photo-blind. Five years is a much more reasonable time for construction of a photo-blind.

Response: The statement in question reads as follows “Currently, refuge visitation is approximately 22,000 visitors per year, of which approximately 100 visitors come for serious photography.” Objective 4, the rationale and each of the three Strategies identified in this particular section target all wildlife photography opportunities. The Refuge support of photography is not limited to serious photography and all levels of photographers are welcome to come enjoy refuge resources.

The Service appreciates your support of an additional photo blind.

37) Pages 4-12 and 4-13, Objective 5: Interpretation Opportunities do not strive to do anything. FWS should say it is going to do it. For Strategy 1, there is no number provided for how many additional staff will be hired to manage an interpretation program. FWS should state what this number is.
Response: Table 5-2 of the CCP identifies additional personnel needed beyond current levels to implement the CCP.

For Strategy 3, don’t “Continue to seek funding.” State what FWS wants as a definite goal “Obtain funding.” No mealy-mouthed language. Goals must be specific and definite and not timid.

Response: Suggested language incorporated into the CCP.

For Strategy 4, the Visitors Services Plan should be available for public review, comment, and understanding.

Response: The Refuge will fulfill all policy and legal requirements including all National Environmental Policy Act requirements when completing this plan.

38) Pages 4-13 and 4-14, Objective 6: Environmental Education Opportunities, do not strive to do anything. FWS should say it is going to do it. For Strategy 1, there is no number provided for how many additional staff will be hired to manage an environmental education program. FWS should state what this number is.

Response: Table 5-2 of the CCP identifies additional personnel needed beyond current levels to implement the CCP.

For Strategy 3, reword to say “Recruit, enlist, and train volunteers that will assist staff in conducting age-appropriate EE programs on a weekly basis.”

Response: Suggested language incorporated into the CCP.

For Strategy 4, reword to say “Provide learning trunks” and not “Promote the learning trunks.” Be specific, definite, and positive.

Response: Suggested language incorporated into the CCP.

39) Page 4-14, Objective 7: Law Enforcement and Visitor Safety, Strategy 1, there is no number provided for how many additional law enforcement officers will be hired. FWS should state what this number is. The Sierra Club supports hiring 3–5 additional law enforcement officers.

Response: Table 5-2 of the CCP identifies additional personnel needed beyond current levels to implement the CCP. The Service appreciates the Sierra Club’s support for hiring additional law enforcement officers.

40) Page 4-16, Objective 1: Public Use Facilities, the Sierra Club supports construction of a visitors’ center as soon as possible.

Response: The Service appreciates the Sierra Club’s support for the construction of a visitor’s center and has identified a new visitor center under Strategy 2, of Objective 1, in Section 4.3 of the CCP.
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For Strategy 5, there is no number provided for how many additional staff is needed to manage visitor services. FWS should state what this number is.

Response: Table 5-2 of the CCP identifies additional personnel needed beyond current levels to implement the CCP. Additionally, Chapter 5 recommends development of a Visitors Service Plan which would help clarify how many additional staff is needed to manage visitor service needs.

For Strategy 8, what is an “open trail system”? FWS should explain what this term means.

Response: The Service corrected grammatical error and the CCP now reads “… open a trail system ….”

41) Page 5-4, Table 5-4, the cost for an additional position should be explained.

The Sierra Club assumes that a maintenance worker will not be paid a salary of $72,400. The Sierra Club assumes pension and other benefits are added to this sum. Please explain to the public how these staff figures were derived.

Response: Costs in Table 5-4 include pensions and other benefits that include the actual cost to the government.

42) Page 5-8, Project 2. Expanding Exotic Control Program, the Sierra Club is concerned about aerial spraying of herbicides. Drift, non-target exposure of plants, and exposure of people cannot be eliminated.

Response: Please see response to comment number 18.

43) Page C-2, “reforestation” is mentioned. FWS should state and show on a map which areas are planned for reforestation in each unit. The public needs this information so that it can review, comment on, and understand all environmental impacts of the CCP.

Response: On page C-2, reforestation is mentioned in the vision statement of the refuge, which is in line with the reforestation projects the refuge has conducted in the past in an attempt to plant additional trees to sequester carbon and promote species diversity of native species that were under represented in newly acquired bottomland hardwood forest tracts.

44) Page C-6, Wetland Management, FWS should show on a map where water control structures and levees exist now on the TRNWR and the locations where additional water control structures are planned in the future. The public needs this information so that it can review, comment on, and understand all environmental impacts of the CCP.

Response: The Refuge maintains only one levee. It is approximately 3500 feet long and located at Champion Lake. The Refuge is in the process of gathering data on structures that were inherited when purchasing tracts for the refuge and no additional water structures are proposed under this CCP.

45) Page C-7, Climate Change, FWS states that “There is little the refuge can do to affect this issue.” This is not correct. For oil/gas activities FWS can require standards for a
reduction in climate change gases and fossil fuel use, reduction of the FWS carbon footprint, and require sequestration using carbon credits to offset fossil fuel use and climate change gas releases.

**Response:** The Refuge is actively engaging in activities to offset the effects of climate change and appreciates your support to sequester carbon. No oil and gas activities are proposed under this CCP.

46) **Page C-7, 1.8.2 Visitor Services,** Public Use Opportunities, the FWS should develop a program where the headquarters is open on weekends to handle visitor information requests.

**Response:** The Service appreciates your support of additional visitor services program and shares in your desire to handle visitor services information on weekends.

47) **Page C-9, 2.2 Alternatives Considered But Dismissed From Detailed Analysis,** FWS states that some members of the public want the water levels of the Trinity River to be controlled for the benefit of wildlife and then states “This alternative, although desirable, is considered infeasible due to legal constraints and does not satisfy the proposed and need for which this EA is being prepared.” FWS ignores the alternative of buying water rights to ensure that a certain amount of water during certain seasons reaches the TRNWR. This is feasible and should be seriously considered as an alternative.

The Sierra Club supports that if TPWD no longer wants Davis Hills State Park that FWS should acquire this and rather than allow a third party do so. The Sierra Club also prefers that no entrance fees be charged and appreciates that FWS “has no desire to initiate any entrance fees within the life of this CCP.”

**Response:** The Service appreciates the Sierra Club’s support in the purchase of water rights. The refuge currently does not own any water rights and will evaluate the opportunity to purchase any if they become available.

The Service shares your desire to include Davis Hills State Park as part of the refuge but actual acquisition would be contingent upon a Preliminary Project Proposal and strategic growth direction.

48) **Page C-11, Oil and Gas Operations,** the public should have an opportunity to comment if there is a proposal for a “Development and Operations Plan.” After all, the public owns the TRNWR. FWS should define what “maximum extent possible” and “greatest extent practicable” are so the public knows the difference between these two terms and when and how they are implemented. FWS should also provide to the public its’ list of “best management practices” for Operational Plans or Special Use Permits.

**Response:** Page C-11 under Oil and Gas Operation states “Mitigation measures will be incorporated to all special use permits allowing any activities relating to oil and gas development and require operators to submit a “Development and Operations Plan” for approval by the Refuge Manager.” This section describes the process used by oil and gas operations on the refuge. Currently, no Development and Operations Plans have been submitted to the refuge.
Maximum extent possible refers to operators doing everything in their control to prevent the release of hazardous materials and substances, crude oil, and produced water.

Greatest extent practicable refers to 50CFR 29.32, “persons holding mineral rights shall, to the greatest extent practicable conduct all exploration, development, and production operations in such a manner as to prevent the damage of erosion, pollution, or contamination to the lands, waters, facilities, and vegetation of the area.”

Best management practices are defined in each Operational Plan and/or Special use permit. These vary depending on the extent of the proposal and vary from project to project.

49) **Page C-12, Wildland Fire**, the Sierra Club disagrees with the FWS statement that “All wildlife fires will be suppressed.” Depending on where a fire occurs it may be ecologically and biologically beneficial to let the fire burn no matter how the fire started. Wildland fires can burn by the establishment of prescriptions that allow burning under certain parameters (temperature, relative humidity, etc.). Other agencies, like the U.S. Forest Service, have programs where they use wildland fires to meet management goals. FWS should have a similar program for wildland fires.

**Response:** On page C-12 directly following the statement in question the Service explains that “suppression strategies range from monitoring the fire while allowing it to burn itself out (as is the case where no life, property, or resources are threatened and/or smoke management is not an issue of concern) to full suppression.” The Service feels that this suppression strategy is consistent with other federal agencies.

50) **Page C-14, Table 2-1, Alternative A - No Action (Current Management)**, the Sierra Club is concerned about aerial herbicide application since chemical drift cannot be controlled, non-target plant species many be affected, and humans may be exposed. The Sierra Club prefers cut and spray of the cut stem over foliar application because cut and spray of the cut stem does not have as much chemical drip and non-target plant species exposure.

**Response:** Please refer to response to comment number 18.

51) **Pages C-15 and C-16, Climate Change, Alternative A - No Action (Current Management)**, for oil/gas activities FWS can require standards for reductions in climate change gases and fossil fuel use, reduce the FWS carbon footprint, and require sequestration using carbon credits to offset fossil fuel use and climate change gas releases. FWS should prepare a plan for oil/gas activities in TRNWR which reduces carbon emissions.

Climate change will alter existing ecosystems and make it more difficult for plants and animals to adapt successfully to these changed ecosystems. FWS must address questions like:

1. How will TRNWR be affected by climate change?
2. What can be done to create more resilient and resistant habitats and ecosystems in TRNWR?
3. What can TRNWR do to reduce C02 or other climate change emissions within the park?
4. What can be done to assist plants and animals so they can adapt to climate change in TRNWR?
FWS should prepare and include in this CCP/EA, a climate change ecological resilience and resistance plan (CCERRP). The CCERRP would assess the biological and ecological elements in TRNWR and the effects that climate change has and will have on them. The CCERRP would also assist plants, animals, and ecosystems in adapting to climate change and would require monitoring of changes and mitigation measure effectiveness. The CCERRP would be based on:

1. Protection of existing functioning ecosystems in TRNWR.
2. Reduction of stressors on the ecosystems in TRNWR.
3. Restoration of natural functioning ecological processes in TRNWR.
4. Use of natural recovery in GTRNWR, in most instances.
5. Acquisition of buffers and corridors to expand and ensure connectivity of ecosystems in TRNWR.
6. Intervention to manipulate (manage) ecosystems in TRNWR only as a last resort.
7. Reduction of carbon emissions that come from TRNWR activities or activities that are regulated by TRNWR (like oil and gas exploitation).

FWS must make a commitment to do something about climate change other than simply monitoring its impacts. FWS must have a plan to assist TRNWR in combating climate change effects.

**Response:** The Service appreciates your concern and proactive approach to climate change. The Service has addressed climate change in the following sections of the CCP.

- Section 1.3.3.1 Climate Change
- Section 3.3.1.4 Estimated Conditions due to Climate Change
- Section 3.3.2.9 Concerns Regarding Wildlife Populations
- Chapter 4, Wildlife and Habitat Management Objective 6, Strategies 1–6

The Service feels that with the above criteria, we can initiate documenting through the various surveys identified in the CCP, any changes in habitat and species shifts in order to develop best management practices based on best available science to address these concerns.

52) Page C-20, Invasive Flora/Fauna Management, Alternative B, for FWS to successfully conduct a program with “hotspots mapping” and prioritization efforts via an invasive species strike team more personnel are needed. This program must be aggressive and out-in-the-field most of the time. The Sierra Club supports hiring 3–5 people for just such a team.

**Response:** The Service appreciates the Sierra Club’s support of an invasive species strike team.

53) Page C-20, Land Acquisition, Alternative B, the Sierra Club supports an overall acquisition goal of 150,000-200,000 acres. This is based upon the need for acquisition of as much of the 100-year floodplain as possible, acquire lands on both the Trinity River and its major tributaries, and acquire an adequate uplands buffer which not only protects the core bottomland hardwood forests but protects additional species and adds to a connecting corridor which allows plant and animals species to migrate up and down the Trinity River to take advantage of habitat opportunities during climate change.
Response: Chapter 4 Objective 1 identifies the Refuge desire to increase the acquisition boundary and continue to pursue attempts to acquire lands from willing sellers and donors throughout the acquisition boundary. The Service will continue to pursue opportunities to purchase lands throughout the Trinity River floodplain to increase the corridors and provide additional habitat.

54) Page C-20, Climate Change, Alternative B, the Sierra Club supports climate change monitoring. However, we believe what has been proposed is not ambitious or complete enough. Instead of survey points that cover 60% of a 1,500 acre parcel, the survey points should represent habitats in 100% of the parcel. The habitats that are proposed for no monitoring, tidal flow lands, differences in elevations, logged within the last 30 years, pine ridges, or severely altered habitats need to be monitored to determine how they change due to climate change.

The Sierra Club also supports monitoring every 3 years versus every 5 years. Five years is a long time to wait. Large changes can occur sooner than 5 years. Waiting 5 years gives only 3 data points in the 15 year life of the CCP. Can FWS really determine trends from only 3 data points in 15 years?

Response: The Service appreciates your support for monitoring the affects of climate change. The refuge feels like 40 survey points within a 1,500 acre parcel representing 60 percent of the refuge’s overall habitat is sufficient to document long term trends due to climate change. Page C-20 also states that the refuge will “continue to monitor bottomland hardwood forest habitat and condition to determine the effects of climate change by conducting groundwater modeling, water quality/water quantity analysis to fully understand the refuge’s water resources, and utilize the best available science to minimize the anticipated impacts associated with climate change.”

55) Page C-21, 2.4.4.2 Public Use Opportunities, Hunting, Alternative B, the Sierra Club suggests a change in the last sentence to read “Opening of additional units of the refuge to hunting throughout the acquisition boundary is contingent on avoidance of conflicts with other uses, availability of suitable habitat, adequate species populations, and sufficient staff and budget to administer the program.”

Response: Suggested language incorporated into the CCP.

56) Page C-22, 2.4.4.3 Facilities, Staffing and Budget, Alternative B, the number of staff proposed is not adequate for the needs. The Sierra Club recommends hiring at least two maintenance workers, three visitor services specialists for the environmental education program, interpretation, and volunteer programs, three to five law enforcement officers, two more biologists, an assistant refuge manager, and 3–5 person invasive species strike team.

Response: The Service appreciates your support in hiring additional staff to support our Comprehensive Conservation Plan.

57) Page C-22, 2.4.5.1 Habitat and Wildlife Management, Resource Protection, Alternative C, of the three alternatives the Sierra Club supports Alternative C because it provides more resources to a NWR that has been traditionally tremendously underfunded and understaffed. The Sierra Club supports hiring an assistant refuge manager.
Response: The Service appreciates your support for selecting Alternative C which is our Proposed Action, as well as for your support of hiring an Assistant Refuge Manager.

58) Page C-22, 2.4.5.1 Habitat and Wildlife Management, Staffing and Budget, Alternative C, the number of staff proposed is not adequate for the needs. The Sierra Club recommends hiring at least two maintenance workers, three visitor services specialists for the environmental education program, interpretation, and volunteer programs, three to five law enforcement officers, two more biologists, an assistant refuge manager, and 3–5 people for a invasive species strike team.

Response: See response to comment number 56.

59) Page C-29, 4.1 Definition of Terms, the Sierra Club is concerned about the non-quantitative and non-specific definitions and nature of terms that are used to show the public various environmental impacts.

For instance, Duration of Impacts, Medium-term, identifies impacts that are “expected to persist for some time into the future though not through the life of the CCP.” This means that an environmental impact could last for 14 years and 364 days and still be considered “Medium-term.” This does not make sense either biologically or ecologically. This does definition not provide enough difference between Medium-term and Long-term, which can last 15 years. There must be enough difference between the two impacts to give a clear meaning of why they are different.

Under, Intensity of Impact, what does “limited effect” mean under Minor. What does “apparent and detectable effects” mean under Moderate? What does “substantial effects” mean under Major? How do these three terms differ from each other? The public must have this information so it can review, comment on, and understand all the environmental impacts of the CCP/EA.

Under Scale of Impact, what does “reasonably expected” and “to have noticeable effects within and immediately surrounding the project area” mean under Local. What does “noticeable effects across the entire refuge landscape” mean under Refuge-wide? What does “reasonably expected to have noticeable effects beyond the refuge landscape” mean under Widespread? The public must have this information so it can review, comment on, and understand all the environmental impacts of the CCP/EA.

Response: Clarification has been provided in section 4.1 for some of the terms used and the Environmental Consequences section of the document has been edited to use these terms consistently.

The purpose of the EA is not only to provide information to the public and the decision-maker, but also to determine if there are significant impacts resulting from an action, thereby determining if an EIS is necessary. It is the opinion of the Service that the terminology provided in section 4.1 has been adequately defined and supports the analysis, which concludes that the proposed action (implementation of the CCP) would not result in significant impacts.

No change was made to the definitions of terms under Duration of Impact. The definitions provided are adequate for the purpose state above.
Changes were made to the definitions in section 4.1 under *Intensity of Impact* and *Scale of Impact* to provide clarification; the meaning and conclusions drawn in the document remain unchanged.

**60) Page C-29 and C-30, 4.2 Effects Common to all Alternatives, Climate Change**, FWS states “Predicated long-term climate-change related impacts would occur regardless of which of the management alternatives … is ultimately selected … Over the 15-year life of the CCP, impacts associated with climate change are likely to be adverse, minor to moderate, and widespread.” It is not clear how this determination was made. What impacts is this based upon? This ignores that for oil/gas activities FWS can require standards for reductions in climate change gases and fossil fuel use, that FWS can reduce its carbon footprint, and that FWS can require sequestration by use of carbon credits to offset fossil fuel use and climate change gas releases. FWS could prepare a plan for oil/gas activities on TRNWR which reduces carbon emissions. FWS could implement a CCERRP to protect and adapt the TRNWR to the effects of climate change. FWS needs to make a real commitment to climate change and not just monitor what occurs.

**Response**: The conclusion of, “impacts associated with climate change are likely to be adverse, minor to moderate, and widespread” are based on what the Service is proposing in the alternatives of the CCP and is clearly identified in the attached EA. As for oil and gas activities this determination is based on current levels of oil and gas activities on the refuge. The CCP is not proposing additional oil and gas activities but oil and gas companies can bring in proposals at any time.

**61) Pages C-30 through C-32, Impacts from Herbicide Application**, FWS says “in such a manner as to minimize adverse effects on non-target resources.” How does FWS plan to do this? If different application systems will be used then it is FWS’s responsibility to explain the environmental impacts of each of these application systems and what mitigation measures will be implemented.

FWS’s response that “EPA analysts carefully review these data to determine whether to register an herbicide and whether certain restrictions on use are needed” is a stock line that is heard. Please see the documents enclosed including one that explains five reasons why a pesticide that causes adverse effects is likely to receive EPA registration: most pesticides are not fully registered; EPA does not register pesticides on the basis of safety; testing is not done on the full formulation of a pesticide; certain important health damage tests are not required for pesticide registration; and EPA review of tests submitted by the chemical companies are less than strict. See Attachment 2.

**Response**: The comment in question is on the first paragraph under “Impacts from Herbicide Application” on page C-30 of the Draft says “in such a manner as to minimize adverse effects on non-target resources.” The two and a half pages that follow explain how the Service will accomplish this including identifying the EPA standards, identifying the necessary compliance with the Federal Insecticide, Fungicide, and Rodenticide Act, identifying Service Policy and Refuge manual requirements. This section also discusses what the Refuge must comply with under a Pesticide Use Proposal, it outlines 569 FW 1.9J, which explains additional measures Refuge Managers must adhere to accomplish minimizing effects on non-target resources. In addition, this section also discusses additional specific measures the refuge has identified above and beyond all mandates and regulations to minimize environmental impacts through
specific spelled out best management practices. In addition to spelling out the impacts from the use of herbicides, this same section also identifies the advantages of this management tool on the constant battle on invasive species and even identifies the target species, application method and purpose of each chemical in Table 4-1.

**Page C-31, FWS states “The refuge will establish threshold levels of damage or pest populations ….” What are the threshold levels of damage or pest populations for the TRNWR? The public must have this information so it can review, comment on, and understand all the environmental impacts of the CCP.**

**Response:** The established threshold levels of damage or pest populations are based according to Service/refuge goals, objectives, and applicable laws. Refuge goals, rationale and 5 strategies are identified in Chapter 4 of the CCP under Goal number 1. Applicable laws are identified in Section 4.2 of the CCP under “Impacts from Herbicide Application.”

**Page C-31, FWS states “Pesticides will not be applied after a moderate/heavy rain or if significant rainfall is forecast within six hours.” What are the definitions for “moderate/heavy rain” and “significant rainfall”? The public must have this information so it can review, comment on, and understand all the environmental impacts of the CCP.**

**Response:** The Service changed the language to read “Pesticides will not be applied after a rain or if any precipitation is in the forecast within 48 hours” to avoid any ambiguity.

**C-32, Table 4-1, Herbicides Used on Trinity River NWR, the Sierra Club is concerned about aerial application of herbicide since chemical drift cannot be controlled, non-target plant species many be affected, and humans may be exposed. The Sierra Club prefers cut and spray of the cut stem over foliar application because cut and spray of the cut stem does not have as much chemical drip and non-target plant species exposure. The public must have this information so it can review, comment on, and understand all the environmental impacts of the CCP.**

**Response:** See response to Comment number 18.

**62) Page C-35, Petroleum Development Impacts, a public comment period should be provided so the public can review, comment on, and understand all the environmental impacts of oil and gas activities when a “plan of operations” is required. The Sierra Club does not understand how FWS can label petroleum exploration, extraction, and facilities operations as “negligible to minor intensity.” Already a number of pipelines have fragmented the TRNWR and are avenues for non-native invasive plant species introductions.**

The oil/gas right-of-ways keep valuable land from succeeding to bottomland hardwood forest. Finally, it is the burning of fossil fuels that has caused much of the excess CO2 that causes climate change. Therefore, the very thing FWS allows on the TRNWR and which FWS says has a “negligible to minor intensity” is what impacts the bottomland hardwood forests of the TRNWR over the longterm and causes changes to those forests which will probably be harmful. FWS should require that any new oil/gas activities or modified existing oil/gas activities mitigate for the CO2 emissions they will release directly and indirectly into our atmosphere.
Appendix J. Service Response to Public Comment

Response: The section in question on page C-35 of the Draft Plan starts off with the sentence “Oil and gas drilling or production is not currently occurring on the refuge.” The same paragraph goes on to explain that impacts are based on what is occurring on the refuge such as an occasional seismograph operation. The Service does not imply that if oil and gas drilling and production operations would be initiated on the refuge that the impacts would be the same as current management and seismograph operations.

The CCP does not propose any additional oil and gas activities on the refuge.

63) Page C-36, Environmental Justice, the FWS fails to state how it will actively involve low income, minorities, and the handicapped people via implementation of the CCP/EA. The public must have this information so it can review, comment on, and understand all the environmental impacts of the CCP/EA.

Response: The Environmental Justice Executive Order 12898 is described in section 4.2 of the CCP under “Environmental Justice.” Section 4.2 is titled “Effects Common to all Alternatives.” The second paragraph under Environmental Justice describes the effects the CCP will have on Executive Order 12898.

64) Page C-36, Other Common Effects, the FWS fails to analyze, assess, and evaluate the impacts of oil/gas activities and other activities on quiet (noise), solitude, natural sounds, and wildlife impacts like road kill or disturbance. The public must have this information so it can review, comment on, and understand all the environmental impacts of the CCP/EA.

Response: “Other Common Effects” states that the analysis of all other impacts associated with implementing the CCP would not have more than “negligible or, at most minor, effects on topography, noise levels, transportation, waste management, human health and safety, or visual resources.” Oil and gas activities were not evaluated in this section because no oil and gas activities are proposed under the CCP.

65) Page C-37, 4.3.1 Impacts on Air Quality, FWS fails to state what the air quality impacts, direct, and indirect, would be of oil/gas activities on TRNWR. This is a major oversight that must be addressed with an emissions inventory. The public must have this information so it can review, comment on, and understand all the environmental impacts of the CCP/EA.

Response: Section 4.2 under Petroleum Development Impacts, the CCP states “oil and gas drilling or production is not currently occurring on the refuge.” Currently there are no proposals to extract oil and gas from the refuge. Section 4.3.1 addresses impacts from implementing the CCP on Air Quality.

66) Page C-37 through C-39, Alternatives A, B, and C, use of water trucks as a mitigation measure can result in the reduction of dust emissions on parking lots, roads, oil/gas areas, or other work areas. Herbicides and their liquid carriers also evaporate and create air emissions. Aerial use of herbicides results in unavoidable air pollution via drift. Use of ATV’s, trucks, or other internal combustion equipment creates air pollution emissions. Visitors drive motor vehicles to TRNWR. Oil/gas activities generate air pollutants. FWS should provide an emissions inventory for projected activities which generate air pollutants in the TRNWR for the next 15 years.
Appendix J. Service Response to Public Comment

Response: The Service agrees with your comment that these activities create air emissions and all anticipated impacts on these resources and associated impacts over the next 15 years are analyzed in pages C-37–C-39 of the Draft CCP.

67) Pages C-38 and C-39, Alternatives Band C, if visitor use goes up then presumably so would visitor hours. What are the total visitor hours that will be generated by each alternative? The public must have this information so it can review, comment on, and understand all the environmental impacts of the CCP/EA.

Response: Pages C-38–39 of the Draft CCP in Section 4.3.1 Impacts on Air Quality. This section identifies the impacts of each alternative on Air Quality. Table 4-2 of the Draft EA is a summary of environmental effects by alternative and summarizes the anticipated impacts of growing visitor oriented programs on the refuge. Section 4.3 of the Draft EA is the Physical Environment and goes into details on the effects of each of the alternatives will have on the physical environment on Trinity River NWR.

68) Pages C-40 through C-42, 4.3.3 Impacts on Soils, Alternatives A, B, and C, oil/gas activity impacts on soils is not provided here or on page C-11. What are the impacts due to oil/gas activities on soils? The public must have this information so it can review, comment on, and understand all the environmental impacts of the CCP/EA.

The Sierra Club does not believe “nearly flat slope, water will have little or no velocity ... the various cited activities would probably result in minimal actual erosion and soil loss.” The Sierra Club has seen a floodplain in action during a flooding event and the velocity is much greater than indicated in the CCP/EA and in our view can cause a great deal of erosion.

Response: Section 4.2 under Petroleum Development Impacts, the CCP states “oil and gas drilling or production is not currently occurring on the refuge.” Currently there are no proposals to extract oil and gas from the refuge. Section 4.3.3 addresses impacts on soils from implementing the preferred alternative in the CCP.

69) Pages C-42 through C-44, 4.4.1 Impacts on Habitat/Wildlife Alternatives A, B, and C, FWS fails to discuss the impacts that the LBDP will have on TRNWR and the effects that other water projects which remove water from the Trinity River will have. This is a major oversight. The Trinity River is a part of and is the heart and soul of the TRNWR even if FWS does not own the water or the land under the river. To ignore the Trinity River because of this fact is not justified by ecological, biological, social, and political realities and understandings. The Sierra Club urges the FWS not to stick its head in the sand when it comes to the value/benefit of water and its retention on the TRNWR. The public must have this information so it can review, comment on, and understand all the environmental impacts of the CCP.

Response: See response to comment number 1.

70) Page C-44, 4.4.1 Impacts on Habitat/Wildlife Alternative C, what does “slightly increase minor, adverse impacts” mean? There is no definition for this phrase on pages C-28 and C-29. The public must have this information so it can review, comment on, and understand all the environmental impacts of the CCP.
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Response: Section 4.4.1 of the EA has been updated to address this concern and avoid any ambiguity.

71) Page C-45, 4.4.2 Impacts on Species of Special Concern, Alternative C, what does “slightly greater than Alternative B” mean? There is no definition for this phrase on pages C-28 and C-29. The public must have this information so it can review, comment on, and understand all the environmental impacts of the CCP.

Response: The section in question is attempting to indicate that although each of the proposed activities would remain minor, long term and localized to refuge wide activities are not anticipated to change the intensity of the impacts on any refuge resources.

The intent of “slightly greater than Alternative B” is to acknowledge that the additional activities proposed under Alternative C will have additional impacts on specific resources since additional activities are proposed. Yet these additional activities will not change the intensity of the impacts from minor to “moderate” or “major” impacts. The Service is attempting to use “plain language” and keep the document as reader friendly as possible.

72) Page C-46, 4.5.1 Impacts on Socio-economics, Alternative B, what does “would be small but still tangible and appreciated” mean? There is no definition for this phrase on pages C-28 and C-29. The public must have this information so it can review, comment on, and understand all the environmental impacts of the CCP.

Response: Section 4.5.1 describes the Impacts on the Social Economy. The section in question states as follows “Relative to the enormous local economy, these socio-economic benefits would be small but still tangible and appreciated around the refuge.” Preceding this comment in the same paragraph in question also described the additional activities proposed that lines out the rationale for this statement. The Service is attempting to use “plain language” and keep the document as reader friendly as possible and feels that the rationale is described and impacts are accurately assessed in the EA.

76) Page C-47, 4.5.2 Impacts on Aesthetic and/or Visual Resources, Alternative B, FWS states “In the long term, visitors may experience improved visual quality of the site and its surroundings consistent with natural native vegetation.” This statement says nothing. What is the benefit and what is the quantification of that benefit? There is no definition for this phrase on pages C-28 and C-29. The public must have this information so it can review, comment on, and understand all the environmental impacts of the CCP/EA.

Response: The Service feels that the benefit is improved aesthetic and/or visual resources. The quantification is that aesthetics and visual resources are based on “surroundings consistent with natural native vegetation.” This implies that the visitors would rather see the potential of native vegetation within the refuge in comparison to flora exotics and urban development.

77) Pages C-48 and C-49, 4.5.3 Impacts Public Use Opportunities, Alternative B, what does “would be slightly more beneficial than Alternative A” mean for hunting, fishing, and interpretive programs? There is no definition for this phrase on pages C-28 and C-29. The public must have this information so it can review, comment on, and understand all the
environmental impacts of the CCP/EA. Why not determine how many more hours or days of visitor use will occur and use this as a quantitative way to show benefits or impacts.

**Response:** See response to comment 71 and 72.

78) **Page C-49, 4.5.3 Impacts Public Use Opportunities, Alternative C,** what does “would be slightly more beneficial than Alternative B” mean for hunting and fishing? There is no definition for this phrase on pages C-28 and C-29. The public must have this information so it can review, comment on, and understand all the environmental impacts of the CCP/EA.

**Response:** See response to comment 71 and 72.

Page C-49, what does “slightly greater than Alternative B” mean with regard to wildlife observation and wildlife photography? There is no definition for this phrase on pages C-28 and C-29. The public must have this information so it can review, comment on, and understand all the environmental impacts of the CCP/EA.

**Response:** See response to comment 71 and 72.

79) **Page C-50, 4.5.4 Impacts on Visitor Use Facilities, Alternatives Band C,** what does “would be slightly more beneficial than Alternative A” or “would be slightly more beneficial than Alternative B” mean for expanding visitor use facilities? There is no definition for this phrase on pages C-28 and C-29. The public must have this information so it can review, comment on, and understand all the environmental impacts of the CCP/EA.

**Response:** See response to comment 71 and 72.

80) **Pages C-50 through C-58, 4.6 Assessment of Cumulative Impacts,** FWS fails again to discuss the impacts that the LBDP will have on TRNWR and the effects that other water projects that remove water from the Trinity River will have. This is a major oversight. The Trinity River is a part of and is the heart and soul of the TRNWR even if FWS does not own the water or the land under the river. To ignore the Trinity River because of this is not justified by ecological, biological, social, and political realities and understandings.

Then to make matters worse, FWS states on page C-51, “The Service is not aware of any refuge management actions that — when added to other past, present or future proposed actions — would result in significant cumulative impacts.” FWS totally ignores the LBDP even though the U.S. Army Corps of Engineers is working now on a draft EIS.

Where is the analysis, evaluation, and assessment of the cumulative impacts that climate change, air pollution, oil/gas activities, roads like the Grand Parkway Segments Hand 1-1, and new developments will have on the TRNWR and the area around the TRNWR. These activities will bring more people and development closer to the TRNWR and thus have greater impacts on the refuge.

The City of Dayton and the area of Dayton is growing significantly. Where is fact this acknowledged and analyzed in the CCP/EA? Why does FWS state on page C-56 that “… the Service has concluded that there would be no significant cumulative impact on the human environment … As a result of projected population and economic growth in the region over the
coming 15 years, overall cumulative economic impacts would continue to be beneficial” when current economic activities depend upon the destruction the economy’s foundation — the destruction of the ecosystems that sustain humans?

In an incorrect assessment of refuge land acquisition impacts the FWS states “The acquisition program will create cumulative adverse impacts. These adverse impacts would be direct, indirect, long-term, moderate to major, and local to refuge-wide.” This assessment fails to include the positive benefits of the acquisition program via the reduction of taxpayer dollars expended on flood insurance, flood insurance payouts, emergency funding to take care of the victims of floods, road destruction, properties that are abandoned and cannot be used for any economic purpose, etc. The land acquisition program assessment is flawed and incomplete.

The Sierra Club urges the FWS not to stick its head in the sand when it comes to the value and benefit of water and its retention on the TRNWR. The public must have this information so it can review, comment on, and understand all the environmental impacts of the GGP.

Response: The Service included an in depth assessment of cumulative impacts including the Luce Bayou Interbasin Transfer Project on the proposed project in the Section 4.6 of the EA

81) Page C-59, 4.9 Irreversible and Irretrievable Commitment of Resources, FWS states “None of the alternatives would result in a large commitment of nonrenewable resources.” This statement ignores that if oil/gas activities increase on the TRNWR that there would be a large FWS commitment to manage, monitor, and ensure that mitigation measures are implemented due to the environmental impacts of oil/gas activities.

Response: No oil and gas activities are proposed in the CCP.

82) Pages 0-1 through 0-11, Draft Compatibility Determination, Recreational Hunting, the compatibility determination does not assess adequately the impacts that hunting has on other uses of the TRNWR (like hiking, wildlife observation, etc.) if all units are closed during hunting season. FWS should implement mitigation measures that ensure that some units are left open during hunting season (these can rotate during the hunting season) so that other users can enjoy TRNWR during some of the best weather conditions (fall and winter) of the year. It is important for FWS to understand that many people do not complain. They simply stop using the TRNWR. Further, if people want to use the refuge but know hunting occurs then they may avoid use of TRNWR and the FWS will never know how its policy deters other uses.

The Sierra Club is concerned when FWS allows anyone, other than refuge personnel, to utilize ATVs because ATVs can damage soil, create noise, disturb wildlife, destroy vegetation, and cause other impacts. The Sierra Club prefers no ATV use by anyone other than FWS personnel.

Response: Page D-5 states “All hunt units are posted ‘closed’ to other recreational uses during refuge mini-seasons.” Tables 1 and 2 of the Draft CD identify all the current and proposed units that hunts would occur. All other units will remain open to the public.

The Service appreciates the Sierra Club’s concern for ATV use and only allows ATV use by non-Service personnel to hunters with disabilities who without the use of ATV’s would not be able to access designated hunting areas.
83) Page C·13, Draft Compatibility Determination, Fishing, Description of Use, (a) What is the use?, there is no discussion about fishing at oxbows or other areas that may hold fish. FWS should discuss these other areas and what regulations apply to them. The public must have this information so it can review, comment on, and understand all the environmental impacts of the CCP.

Response: Table 1 and 2 of the Draft Fishing CD identifies the units currently open and proposed to be open to fishing. If oxbows exist in these open or proposed to be open units then the same regulations apply.

84) Page C·33, Draft Compatibility Determination, Environmental Education, the Sierra Club is confused about interpretation and environmental education. In the Sierra Club’s view they are so similar as to be one and the same. You cannot have environmental education without interpretation.

Environmental education should not just be focused on school children.

When the Sierra Club leads outings to the TRNWR we provide environmental education and interpretation. So there are private sources that conduct environmental education and interpretation on TRNWR that FWS does not acknowledge. FWS must figure out how it can contact, communicate, and coordinate with these other sources of environmental education and interpretation so that more effective interpretation and environmental education programs can be prepared and implemented.

Response: The Service defines interpretation as a communication process that forges emotional and intellectual connections between the audience and the resource (605 FW 7.6A).

The Service defines environmental education as opportunities within the Refuge System that incorporates on-site, off-site, and distance learning materials, activities, programs, and products that address the audience’s course of study, refuge purpose(s), physical attributes, ecosystem dynamics, conservation strategies, and the Refuge System mission (605 FW 6.6 D).

Chapter 4, Objectives 5 and 6 lay out the foundation of improving the interpretive and environmental education program for the refuge.

85) Page C·38, Draft Compatibility Determination, Boating, the FWS should include the Trinity River as part of this program. The FWS does have a responsibility for visitors that uses the Trinity River to access and enjoy the TRNWR or that uses the TRNWR to access and enjoy the Trinity River.

Response: Although there are no boat ramps directly on the Trinity River, the refuge provides access to the River via Pickett’s Bayou boat ramp if water is high enough and the narrow bayou below the refuge boundary does not have any trees or debris blocking the waterway. Additional areas proposed for non-motorized boasts include the Brierwood Unit and some canoe/kayak trails that go through the R&M/Daniels adjoining units.

86) Page 0-44, Draft Compatibility Determination, Research, the Sierra Club is concerned about researchers using ATVs on TRNWR. Whenever possible, FWS should not allow researchers to use ATVs on the TRNWR. When allowed there must be restrictions so that
environmental damage is not caused by researchers using ATVs. The noise made by ATVs is a negative impact that must be addressed.

**Response:** Researchers are restricted to current trails using ATVs and are encouraged to walk as much as possible. ATV use is not permitted by researchers if resource damage could occur such as in rainy or muddy conditions. Many researchers cannot use ATVs until they pass a certified training course. The Service always considers resource damage prevention before using ATV’s internally or when allowing researchers to use ATV’s.

87) Pages G-1 through G-3, Wilderness Review Trinity River NWR, the Sierra Club disagrees with FWS under 2.1 Identification of Lands that Meet the Size Criteria, when it states “… the team found that no areas meet the size criteria …. There are numerous roads scattered across the Refuge. There are no road less areas or island of any sufficient size as to make feasible its preservation for wilderness management.” This is not true.

The Brierwood Unit, for instance, has areas that are less than 5,000 acres in size, with no roads, that can be managed as wilderness. FWS does not apply its own size criteria in 610 FW 4.8 which states “An area of less than 5,000 contiguous acres that is of sufficient size as to make practicable its preservation and use in an unimpaired conditions, and of a size suitable for wilderness management.” FWS provides no documentation of how large units are, where roads are or used to be in units, and why no units have areas large enough to be managed as Wilderness. Since Teddy Roosevelt designated the first NWR, Pelican Island, which later the U.S. Congress designated as Wilderness, and since the size of this area is 6 acres it would foolish and impossible for FWS to argue that it does not have any units or portions of units which are large enough to manage at Wilderness in TRNWR.

The Wilderness Act of 1964 states under Definition of Wilderness, **Section 2.(c),**

(3) that a wilderness “has 5,000 acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition.” The Definition of Wilderness states that a Wilderness “(1) generally appears to have been affected primarily by the forces of nature, with the imprint of man’s work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation;” (3) as quoted above, “(4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.” These are the criteria that FWS must use. If they are used than various portions of Brierwood, Page, McGuire, Butler, Boar’s Den, Silver Lake, and Hirsch Units qualify for Wilderness.

It is untrue that “… none of the refuge tracts met the naturalness criteria.” In fact, FWS bought the best examples of bottomland hardwood forest that exist on the Trinity River to establish the TRNWR. To suggest that all acres of all units have roads, housing, oil/gas infrastructure on them and thus keeps these areas from meeting the so-called “naturalness criteria” is untrue. Using the words quoted above it is apparent that TRNWR has units or portions of units that “generally appears to have been affected primarily by the forces of nature, with the imprint of man’s work substantially unnoticeable.” No documentation is provided by FWS for each unit or portions of each unit to show that these areas either qualify for Wilderness or are disqualified as Wilderness. All that FWS provides is the above quoted statement that “… none of the refuge tracts met the naturalness criteria.” Where is the beef?
Finally, the statement that “… none of the units within the Trinity River NWR qualified for opportunities for solitude or primitive and unconfined creation” is also untrue. Again, no documentation is provided for each unit or portions of each unit to show what criteria were used to either qualify a unit or area or Wilderness or disqualify a unit or area as Wilderness. The Sierra Club has taken groups of people to a number of units in TRNWR including Champion Lake, Boar’s Head, McGuire, Butler, Page, and Brierwood. The Sierra Club, its members, and members of the public experienced solitude and primitive unconfined recreation including birding, nature study, tree identification, hiking, wildlife observation, photography, etc. The Sierra Club does not understand why FWS dismisses cavalierly the potential for Wilderness in TRNWR.

FWS should state clearly what the minimum requirements are for wilderness. The Sierra Club vigorously disagrees with FWS that none of the units “meet the minimum criteria for a Wilderness Study Area.” With regard to primitive recreation and solitude the Sierra Club has visited Champion Lake, Boar’s Den, Page, McGuire, Butler, and Brierwood Units. In most of these units the hand of man is not noticeable, solitude is present as much as in Little Lake Creek Wilderness Area in Sam Houston National Forest. People experience quiet and natural sounds as strongly and vividly as any natural area in Texas. The size of the units does not disqualify them from consideration because The Wilderness Act allows wilderness less than 5,000 acres in size as long as it can be managed as Wilderness.

Many of the units have few or no roads, have remnant roads that no longer function as roads, or have roads that do not disqualify the rest of the unit from consideration as Wilderness. The one outstanding problem, and even this does not keep an area from being designated as Wilderness, is that oil/gas mineral rights are not owned by the government.

In the five East Texas Wilderness Areas on the National Forests and Grasslands in Texas many of the mineral rights are not held by the federal government. Yet these five areas have been designated as Wilderness. An example of this is found in Upland Island Wilderness Area in Angelina National Forest where the oil/gas mineral rights are not owned by the U.S. government.

The FWS has done a very poor and inaccurate job of determining the Wilderness potential of the TRNWR. FWS must do better in the final CCP/EA. The public deserves nothing less.

Response: Additional rational has been added to Section 2.1, Appendix G of the CCP in an attempt to help address these concerns.

88) The TRNWR CCP/EA has failed to adequately discuss Off-Site Development Problems. The TRNWR must involve itself with communities and agencies that may affect the TRNWR so that it can defend against projects and developments that will result in direct, indirect, cumulative, connected, and longterm environmental impacts that ultimately will lead to the degradation of TRNWR lands. This includes getting involved with permitting of nearby developments of all kinds (industrial, commercial, institutional, and residential); flood control projects from drainage districts; Region H Water Planning Group (to protect in-stream flows and floods); road projects; energy, chemical, oil/gas, and pipeline projects; and watershed degradation due to non-point and point source water pollution.

The Ecological Services Office of FWS must coordinate closely with the TRNWR to ensure that maximum mitigation benefits accrue to the TRNWR when dealing with project proposals.
and Section 10/404 U.S. Army Corps of Engineers permits and Section 401 Texas Commission on Environmental Quality permits.

Response: The Service feels that Section 4.6 of the EA “Assessment of Cumulative Impacts,” with the addition of the analysis of the Luce Bayou Interbasin Transfer Project (LBITP) in the EA (based on these comments), has accurately assessed the impacts of the Proposed Action when added to other past, present and reasonably foreseeable future actions ....” The Service also feels that the proposed action of implementing the CCP will not add to the impacts associated with the LBITP.

The refuge takes great pride in considering ecoregional benefits when implementing management activities on the refuge and appreciates the Sierra Club’s support in continuing to work with other federal, state, and private partners to benefit natural resources.